Project Baseline Summary Report

Data Source: **EM CDB** Report Number: **GEN-01b**

Operations/Field Office: **Idaho** Print Date: **3/10/2000**

Site Summary Level: **Idaho National Engineering and Environmental Laboratory** HQ ID: **0209**

Project **ID-OIM-105 / Security Facilities Consolidation Project**

General Project Information

Project Description Narratives

Purpose, Scope, and Technical Approach:

Definition of Scope: Category I and II quantities of SNM will be consolidated at two existing ICPP storage facilities. The project will construct a new Protected Area security perimeter around ICPP-651 and upgrade existing security equipment at ICPP-749. The new perimeter will include security fencing, an intrusion detection system, lighting, closed-circuit television (CCTV) for alarm assessment; and a new access control facility with a central alarm station (CAS) and security alarm control system (SACS). The access control facility will provide space for security equipment to monitor personnel/vehicular access into the Protected Area, and will be serviced with standard utilities.

The SACS will monitor, control, and assess security alarms and video information received from new intrusion detection and CCTV systems located in the Protected Area, and existing security systems throughout the ICPP. The SACS will consist of redundant computers, video assessment equipment (cameras, monitors, controllers, recorders, switches, fiber-optic distribution), and alarm system interfaces. Security lighting will be installed at the new Protected Area to support CCTV operations and security inspections. Security systems will be supplied with commercial, optional standby, and uninterruptible electrical power. Classified interests located outside of the new Protected Area will be consolidated at approximately six existing facilities. Portions of these facilities will be upgraded to function as security Limited Areas in compliance with DOE Order 5632.1C.ı

Security requirements for three existing Protected Area access control facilities, at the present ICPP security perimeter, will be reduced to Property Protection Area entrances in accordance with DOE Order 5632.1C. These facilities will support required security inspections, provide a radiological contamination control point, and support personnel accountability during emergency evacuations, as required by DOE Order 5500.3A.˝

ı Technical Approach: Design will be performed by the M&O architectural-engineering (A-E) organization. To the extent feasible, construction and procurement shall be accomplished by fixed price contracts and subcontracts awarded on the basis of competitive bidding. Title III inspection will be accomplished by the operating contractor. The Security Alarm and Control System (SACS) hardware and software are being provided as Government Furnished Material (GFE) from Lawrence Livermore National Laboratory (LLNL). DOE-ID required administrative and other support functions shall be furnished to the project by the DOE-ID functional orgainzation. Administrative and other support functions shall be furnished to the project on a matrix basis by the LMITCO functional orgainzation.

Project Status in FY 2006:

This project will be completed in FY 1999 and will meet the Environmental Management (EM) site End State after the size of PAs requiring patrols, alarms, and access controls are significantly reduced. Aging security systems are replaced with new technology. Risk of sabotage or theft of SNM is reduced. These actions, and a program of self assessment will ensure that compliance to DOE orders is maintained and plant operations continue.

Post-2006 Project Scope:

Not applicable.

Project End State

Construction of this project will allow deactivation of the existing security perimeter surrounding the overall Idaho Chemical Processing Plant site, accommodate changes to the ICPP mission, decrease plant operating costs, and support environmental remediation projects.

Project Description Narratives

Cost Baseline Comments:

Contingency of 19% (including management reserve) was used for capital costs. Project cost estimates are developed at each phase of the project per the INEEL Cost Estimating Guide. These phases are identified as (1) Conceptual design, (2) Title I Design, (3) Title II Design, and (4) Approved for Construction (AFC). These estimates change through time as a part of the normal design evolution and further definition of project uncertainties based on items such as the stage of design complexity (e.g. conceptual versus AFC), award prices, approved baseline plans, and subsequent changes. At each project phase, a contingency analysis is performed on each estimate to determine the appropriate level of contingency required to perform the project.

Safety & Health Hazards:

The ICPP stores Category I, II and IV quantities of SNM. Threats posed to the environment, the public, and site workers include radiological and toxicological releases resulting from sabotage or theft of SNM and delays due to a limited number of personnel exit lanes from the plant. Construction of the SFC project will reduce the risk of sabotage and theft of SNM by replacing existing security systems with new technology and reducing Protected Areas that require patrols, alarm equipment, and access controls from approximately 47 acres to 2 acres; and will facilitate plant evacuations by increasing the number of personnel exit lanes through the ICPP security perimeter. A Determination of Safety Analysis (Form 5368), submitted for Operational Safety Analysis review was approved April 2, 1993. This review determined that construction of the SFC project was a readily-accepted type of activity, would not require further safety analysis or descriptive changes to safety documentation, and that existing industry codes and standards, if implemented, would control potential hazards. A formal project Hazards Review Board is established to review individual task design documents prior to issuance for construction.

Safety & Health Work Performance:

Performance of all project work is controlled by LMITCO procedures that implement requirements of national codes and standards, and DOE Orders.

Design work is performed in compliance with the Project Design Criteria which comprises the initial technical baseline for the project. This document was reviewed and approved by company S & H professionals. Work is peformed in accordance with company procedures which implement a disciplined approach to engineering design and an independent design review process. The design review process ensures that safety and health, constructability, and operability aspects of the design are reviewed by independent company professionals, and that their comments are addressed in the approved documentation.

Unique construction safety and health issues are identified prior to award of construction subcontracts through safety analysis documentation and formal hazards reviews. Subcontractors are required to implement current LMITCO requirements as defined in the company ES&H manual for construction subcontracts. Subcontractors are required to prepare and implement a health and safety plan that invokes requirements equivalent to LIMITCO procedures, or to adopt the LMITCO health and safety plan. The subcontractor plan is reviewed for acceptance by LMITCO safety professionals prior to issuance of the subcontract notice to proceed. Subcontractor performance of safety surveys of both the construction site and activities is required on a regular basis and is supplemented by weekly LMITCO construction management safety surveys as well as periodic surveillance by independent safety professionals. All subcontractors are required to implement a stop-work authority in their subcontract safety plan.

Upon completion of construction, and prior to SO Testing, an occupancy safety walk-through is performed by project and construction management,

Project Description Narratives

operations, and safety personnel to ensure that testing can be performed in a safe manner and that the facility/system is complete. After completion of SO Testing, a facility acceptance review is performed to ensure that no outstanding deficiencies exist and that the facility/system is ready for transfer to the operating organization. Correction of any defieciencies noted by the reviewing project and safety personnel is required prior to final facility/system transfer.

Costs per FTE associated with project Safety & Health activities are in accordance with the LMITCO FY98 Planning Requirements Document.

PBS Comments:

Baseline Validation Narrative:

The INEEL EM Integration Board (joint senior level DOE-ID and LMITCO management) provided an independent validation of the Project Baseline Summary in respect to scope, schedule, cost estimate and basis of estimate for this decision unit as used to construct the draft PBS. During FY 1997, an independent validation was performed to review and validate the purpose, scope of work, schedule, cost estimates, and basis of the estimates for each of the INEEL PBS.

DOE-ID validation for FY1999 funding was received April 17, 1997.

General PBS Information

Project Validated?	Yes	**Date Validated:**	4/17/1997
Has Headquarters reviewed and approved project?	No		
Date Project was Added:	12/1/1997		
Baseline Submission Date:			
FEDPLAN Project?	Yes		

Drivers:

CERCLA	RCRA	DNFSB	AEA	UMTRCA	State	DOE Orders	Other
						Y	Y

Project Identification Information

DOE Project Manager:	Wayne B. Shigley
DOE Project Manager Phone Number:	208-526-1986
DOE Project Manager Fax Number:	208-526-9150
DOE Project Manager e-mail address:	SHIGLEWB@inel.gov

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General PBS Information

Is this a High Visibility Project (Y/N):

Planning Section

Baseline Costs (in thousands of dollars)

	1997-2006 Total	2007-2070 Total	1997-2070 Total	1997	Actual 1997	1998	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006
PBS Baseline (current year dollars)	10,782	0	10,782	8,923	3,964	1,014		845	0	0	0	0	0	0	0
PBS Baseline (constant 1999 dollars)	10,782	0	10,782	8,923	3,964	1,014		845	0	0	0	0	0	0	0
PBS EM Baseline (current year dollars)	10,782	0	10,782	8,923	3,964	1,014		845	0	0	0	0	0	0	0
PBS EM Baseline (constant 1999 dollars)	10,782	0	10,782	8,923	3,964	1,014		845	0	0	0	0	0	0	0

	2007	2008	2009	2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
PBS Baseline (current year dollars)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PBS Baseline (constant 1999 dollars)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PBS EM Baseline (current year dollars)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PBS EM Baseline (constant 1999 dollars)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Baseline Escalation Rates

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1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
0.00%	0.00%	0.00%	2.70%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%

2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%

Project Reconciliation

Project Completion Date Changes:

Previously Projected End Date of Project: 5/1/1999

Current Projected End Date of Project: 5/1/2000

Explanation of Project Completion Date Difference (if applicable):

The project TCP has not changed.

Project Cost Estimates (in thousands of dollars)

Previously Estimated Lifecycle Cost (1997 - 2070, 1998 Dollars):	6,930	**Actual 1997 Cost:**	3,964	**Actual 1998 Cost:**	
Previously Estimated Lifecycle Cost of Project (1999 - 2070, 1998 Dollars):	2,966	**Inflation Adjustment (2.7% to convert 1998 to 1999 dollars):**			80
Previously Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	3,046				

Project Cost Changes

	Cost Adjustments	Reconciliation Narratives
Cost Change Due to Scope Deletions (-):		
Cost Reductions Due to Efficiencies (-):		
Cost Associated with New Scope (+):		
Cost Growth Associated with Scope Previously Reported (+):		
Cost Reductions Due to Science & Technology Efficiencies (-):		
Subtotal:	3,046	

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Project Reconciliation

Additional Amount to Reconcile (+): -2,201 The project TCP has not changed.

Current Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars): **845**

Milestones

Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
COMPLETE A/E DESIGN	COMP A/E DES		9/30/1998		6/30/1999						
COMPLETE CONSTRUCTION	COMP CONS		3/30/1999		3/30/2000						
COMPLETE CONSTRUCTION SF-6 TMI ISFSI SECURITY PERIMETER	COMP CONS SF6		12/31/1998		12/31/1998	12/31/1998					
PROJECT MISSION COMPLETE	OIM-05-009		5/1/1999		5/1/2000						
Project Start			3/1/1993								

Milestones - Part II

Milestone/Activity	Field Milestone Code	Critical Decision	Critial Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description
COMPLETE A/E DESIGN	COMP A/E DES										
COMPLETE CONSTRUCTION	COMP CONS										
COMPLETE CONSTRUCTION SF-6 TMI ISFSI SECURITY PERIMETER	COMP CONS SF6										
PROJECT MISSION COMPLETE	OIM-05-009				Y						
Project Start				Y							